

U.S. DEPARTMENT OF TRANSPORTATION  
CHIEF INFORMATION OFFICER TESTIMONY  
BEFORE THE  
HOUSE COMMITTEE ON GOVERNMENT REFORM'S  
SUBCOMMITTEE ON TECHNOLOGY, INFORMATION POLICY,  
INTERGOVERNMENTAL RELATIONS AND THE CENSUS

Mr. Chairman and members of the committee, thank you for the opportunity to appear today to discuss the Department of Transportation's implementation of the Federal Enterprise Architecture program.

I serve as the Department's Chief Information Officer (CIO), and I also currently serve as the vice-chair of the Federal CIO council.

The DOT Office of the Chief Information Officer (OCIO) has operational responsibility for Departmental network and communications infrastructure, as well as providing shared services for the Office of the Secretary and several Operating Agencies (OAs) currently engaged in the Department's Information Technology (IT) services consolidation.

It is my observation and DOT experience that the Federal Enterprise Architecture initiative begun little more than two years ago is working well in driving previously introspective government entities with a diversity of IT initiatives and agendas to focus on business based, results oriented, best practices integration of information technology investments, their common infrastructures, and external information services delivery. This drive is beginning to deliver results that will expedite our ability to improve cyber security, mine data, enhance information sharing, eliminate redundancies, and document IT costs and performance.

The Department of Transportation's (DOT) Enterprise Architecture (EA) actively supports the Department's core mission goals of Safety, Mobility, Global Connectivity, Environmental Stewardship, and Security by providing a framework for mapping and relating the elements that comprise the Department IT environment in a single location. The goals of the DOT Enterprise Architecture Program are to:

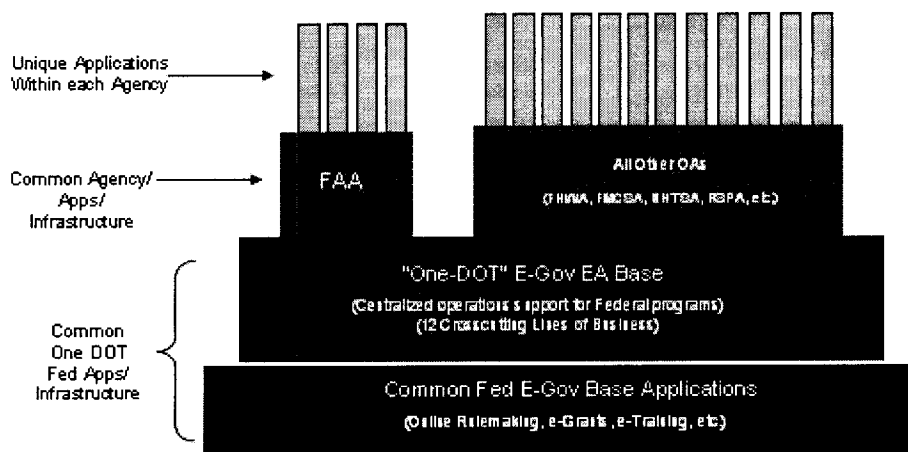
- Reduce Redundancy and Overlap of Applications and Systems
- Increase System Integration and Correlation to Business Processes
- Improve data quality and timeliness for use in the CPIC process
- Optimize Data Collection and Management
- Improve Access to Information -
- Guide and Coordinate Technology Investments
- Leverage Economies of Scale
- Promote Current and Flexible Technologies
- Satisfy Legal and Regulatory Requirements

Like most, the DOT's Enterprise Architecture consists of a current baseline and target architecture; a gap analysis between the two; a project sequencing plan to close the gap; and a standards profile to help guide standardization. Our Enterprise Architecture provides a clearer understanding of where IT dollars are being spent; what technologies support our business processes; who is responsible for and impacted by process or technology changes; and what technology standards we should employ today as well as in the tactical and strategic future.

At the DOT, Enterprise Architecture motivated changes are evidenced by an aggressive implementation and methodology responsive to OMB's IT portfolio investment direction and concurrent support of our Department's strategic plan. We see Enterprise Architecture as both a management program and a documentation methodology that together provides an actionable, coordinated view of an enterprise's strategic direction, business processes, information flows, and resource utilization.

The DOT's Enterprise Architecture can be described as a Federated model composed of smaller segments that are distinct areas of mission activity carried out from within each of the Department's Operating Agencies, yet linked to the overall DOT Enterprise Architecture. This federated view of the Department's Enterprise Architecture represents a carefully considered definition of DOT's organizational structure, business processes, information needs, application systems and technology. The Enterprise Architecture emphasizes the DOT's focus on implementing business needs-driven IT solutions that contribute to and improve the Department's mission performance and service delivery across all lines of business. It deemphasizes organizational structure and shifts that emphasis to DOT missions, in particular safety and mobility. It promotes an end-to-end consideration of business process needs across the operating agencies, a focus that is at the heart of Clinger-Cohen Act compliance at DOT.

As captured in the graphic below,

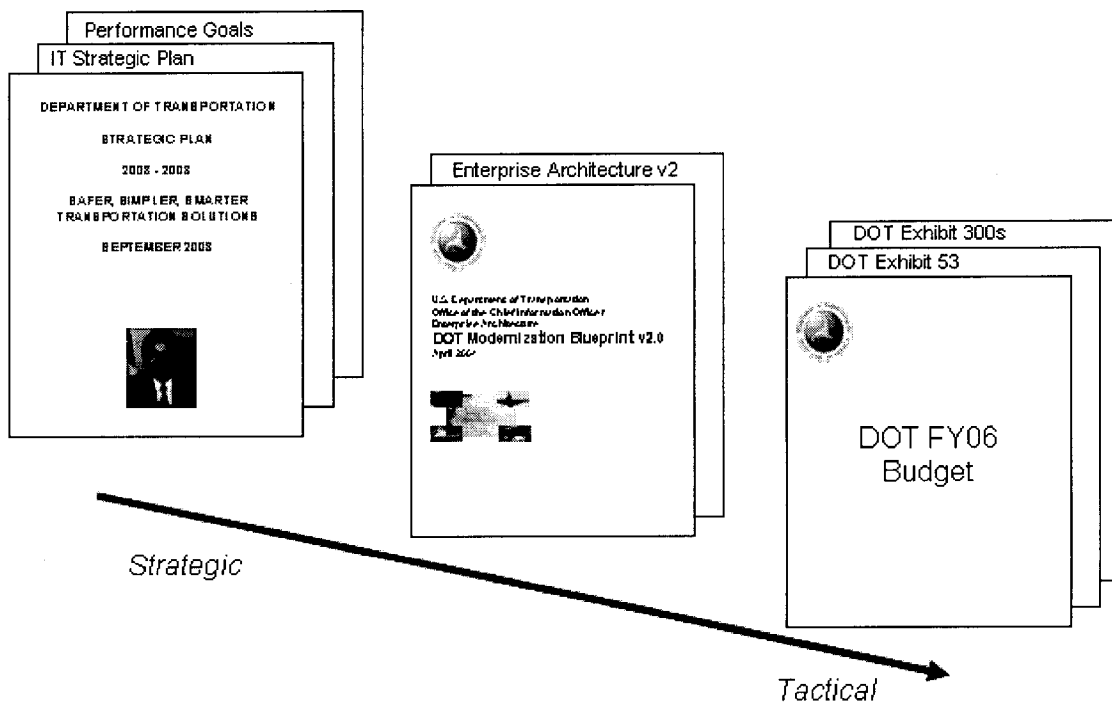


implementing architectural segments is important because the large scope of the DOT enterprise makes it difficult to effectively fund and successfully manage a large number of Enterprise Architecture activities simultaneously. By taking a phased approach to the development of our Enterprise Architecture, the Department is able to determine a prioritized sequence of activities that takes into account urgency, maturity of solution, and stakeholder support for future phases. This sequencing approach also improves the likelihood of successful implementations of IT solutions and optimizes IT spending across the Department.

Under a federated approach, DOT:

- Defines the core set of rules and approach for Enterprise Architecture;
- Applies a standard framework for the entire organization;
- Allows for flexibility by each Operating Administration to further refine their vertical Enterprise Architectures;
- Ensures that Operating Administration verticals are compliant and consistent with the core model; and,
- Focuses Departmental efforts on cross-cuts and eGov initiative coordination as well as Operating Administration efforts on core processes.

The graphic below highlights the continuity, or traceability from strategy to tactical, of our Department's Enterprise Architecture evolution.



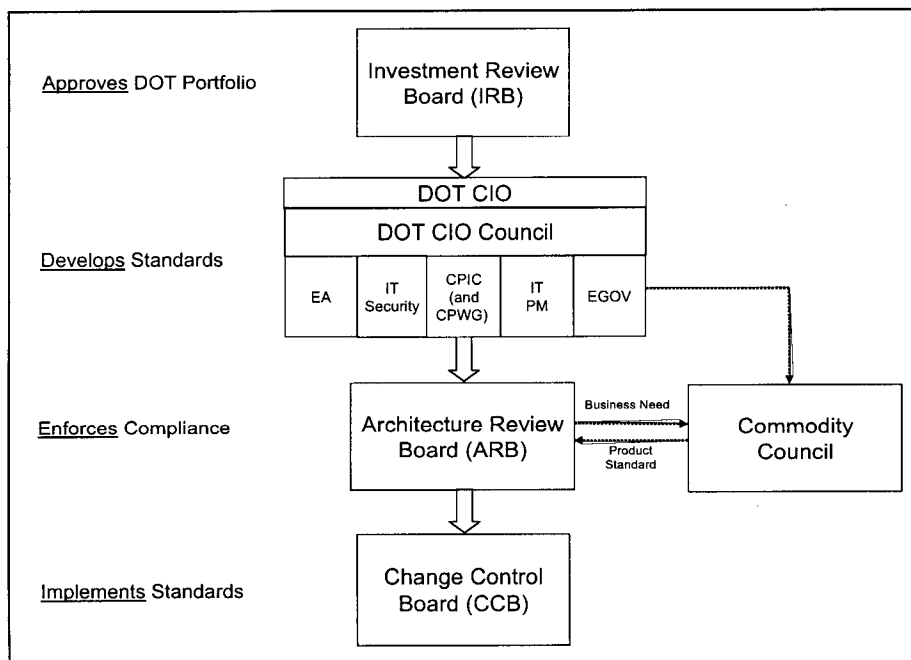
Examples of the DOT's emphasis on Enterprise Architecture begin within my own CIO organization, where an Enterprise Architecture Program Management Office team is dedicated to full time leadership and continuity in the development, implementation, and

maintenance of a single DOT Enterprise Architecture. The team supports the Departmental CIO Council's Enterprise Architecture subcommittee, Operating Administration level working groups, and related activities. The team defines formal Enterprise Architecture standards, processes and practices. The team develops, manages, and maintains the DOT Enterprise Architecture Portal/Repository and the DOT's IT Capital Planning and Investment Control (e-CPIC) environment.

A Departmental Investment Review Board (IRB), chaired by the Department's Deputy Secretary, reviews proposed IT investments from across DOT and decides their appropriate disposition based on project assessments performed using standardized investment review criteria, including enterprise architecture alignment.

The Department's Architectural Review Board (ARB) is the governance body charged with evaluating and recommending changes to the DOT Enterprise Architecture and ensuring that investments in IT comply with established Departmental policies for enterprise architecture, capital planning and security, standards, and processes. The DOT's Enterprise Architecture Technology Reference Model provides the ARB with information on specific technologies, hardware, and software used throughout the DOT enterprise. These activities reduce security vulnerabilities, wean out duplicative IT spending within our Operating Agencies and hastens the delivery of successful IT solutions. While the initial stage is to identify "standards" for the Technical Reference Model, another effort is underway to identify products/services which are needed by individual organizations. These "authorized products" will be products that work in the COE and have been approved by the Architectural Review Board for inclusion in the DOT's Enterprise Architecture Technical Reference Model. The rigor will be less than "standards," but their inclusion in the Technical Reference Model is meant to further the need for interoperability within DOT and with our business partners.

The DOT's Integrated Governance Structure is highlighted in the diagram presented below.



When taken together, elements of this governance model gracefully implement the investment review requirements of the Clinger-Cohen Act at DOT.

In support of our Enterprise Architecture, the DOT has complemented its team and committee activities by implementing support tools such as the DOT Enterprise Architecture Portal/Repository, a baseline and future Federal Enterprise Architecture Reference Model data repository, or Enterprise Architecture Portal, for use by DOT architects, capital planners and decision makers. The Portal is a custom-developed database with a web-interface front end, allowing for easy viewing of Enterprise Architecture data. The Enterprise Architecture Portal & Repository allows the Enterprise Architecture information to be captured for each of the sub-architecture levels and related both within and across the levels in a single, on-line location. DOT Enterprise Architecture Repository contains current and future configurations of the information and allows for capture of the information in a Federated view. We also leverage full advantage and implementation of government-wide tool sets, such as the electronic Capital Planning and Investment Control web-ware to document business cases and support OMB IT investment reporting.

Building on our current efforts the DOT recently published an updated version of our Modernization Blueprint that reflects current (baseline) business and technology operating environment and a future (target) state that encompasses the goals of the DOT IT Strategic Plan, Annual Performance Plan, E-Transportation and the President's Management Agenda. This Modernization Blueprint documents continued progress in the re-direction of the DOT Enterprise Architecture program to further incorporate the Federal Enterprise Architecture Framework, embrace the e-Government initiatives, align our mission processes, and gain buy-in from the Operating Administrations.

The DOT has developed several documents to aid in the inculcating Enterprise Architecture understanding and use, such as the "DOT Enterprise Architecture Methodology" and "DOT Enterprise Architecture Primer" respectively.

The Federal Enterprise Architecture implementation, while viewed as fairly successful thus far, does have its issues. In several instances the time allowed between budgetary guidance and/or changes and expected Agency execution has been constricted. Other expectations, such as a full time program manager for each initiative is unrealistic for many small agencies with limited staff. These short-comings are being reviewed and the Federal CIO Council is working with OMB to ensure a workable federal Enterprise Architecture process is rapidly adopted and implemented.

In summary, let me again state the Department of Transportation's support for and use of the Federal Enterprise Architecture instrument in identifying, relating and managing IT portfolio investments, OMB proactive sponsorship of the FEA initiative. I thank the committee for the opportunity to speak with you regarding this matter and answer any questions that you may have.